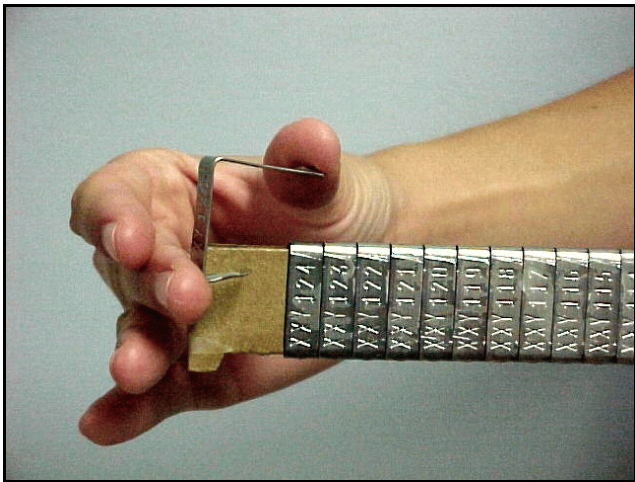
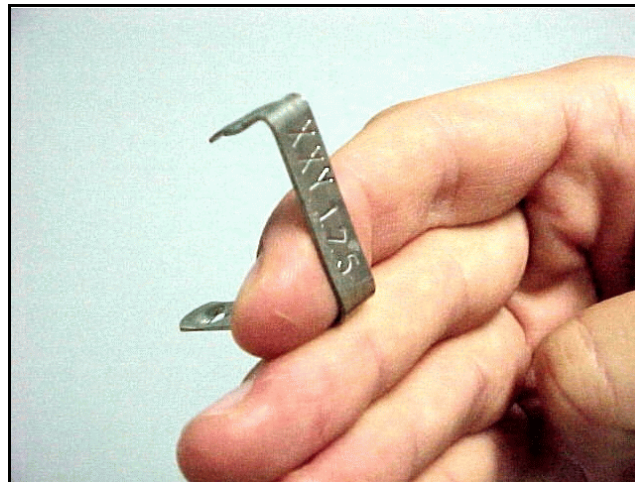


APPENDIX C: TAGGING**INCONEL TAGS****How to tag a sea turtle using the self-piercing, self-locking Inconel alloy tags supplied by the centralized Cooperative Marine Turtle Tagging Program of the Atlantic.**

- Step 1: Remove a tag from the strip and record its identification number on the tagging form. Be careful not to bend the tag from its original shape. Only peel back enough tape on the strip to remove one or two tags at a time. If more tape is removed, the tags are liable to fall off and be lost.
- Step 2: With the pointed (piercing) side of the tag up, place the end of your index finger inside the tag against the bend.
- Step 3: Hold the applicator in your other hand. Using your index finger, pull the tag straight back into the open jaws of the applicator, aligning the point opposite the side in the jaws with the small depression. A firm pull will be needed for the tag to snap completely into its correct position. Take care not to squeeze the applicator together before you are ready to tag the turtle. If the handles are squeezed part way and then released, the tag will fall out.
- Step 4: Locate the correct site where the tag will be applied to the trailing edge of the rear flipper (just proximal to the first scale), and swab the area with betadine. This is easiest done by first placing turtle on its carapace, with the plastron facing upwards. If someone is available to help, have the person help you hold the turtle and its flipper so it won't move around; it is especially important to hold the flipper so that the turtle does not pull it from you while you are clamping down on the tag. Be sure to position the tag so there will be some "overhang" after it is attached to the flipper.
- Step 5: Apply the tag by squeezing the applicator together in a firm, steady manner. The tag point will pierce the flipper and lock into place with the tip bending securely over, like a staple point. The applicator must be squeezed together with some force at the final point in order to fully lock the tag. It may be helpful to use both hands when squeezing the applicator. If the tag does not lock, grasp it once again with the pliers and apply more pressure. A tag that is not applied properly will be shed quickly. If you cannot get the tag to lock, remove it and apply another tag to the same flipper.
- Step 6: Repeat the entire procedure and apply a second tag at the same site on the other rear flipper. All turtles should be double tagged in this manner. Use consecutive tag numbers on the same turtle, whenever possible. If a tag is ruined for some reason, please record this information on the tagging form and return the bad tag. If the recommended tagging site has been damaged or for some other reason is unsuitable for tag application, then an alternate site may be used along the trailing edge of the front flipper.



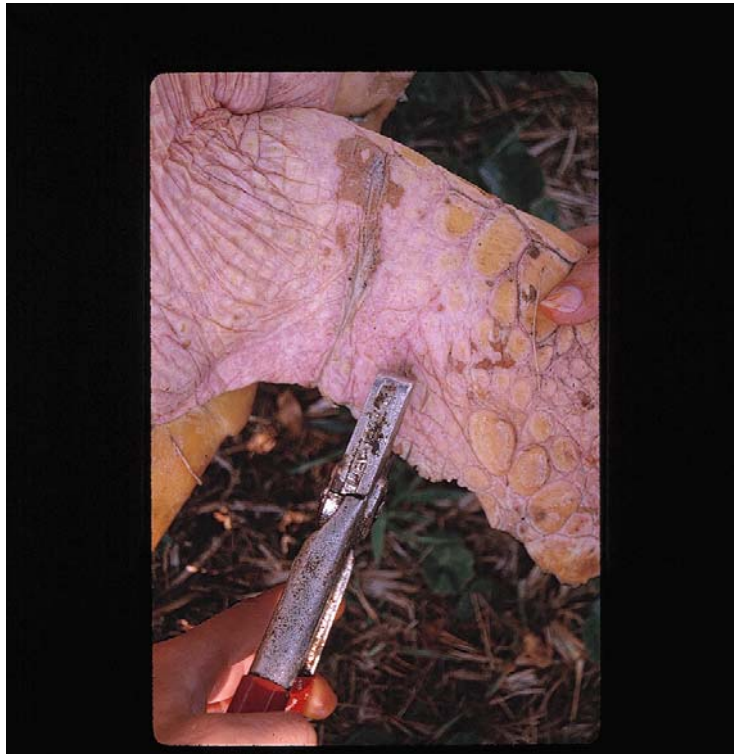
Step 1. Carefully remove tag from strip.



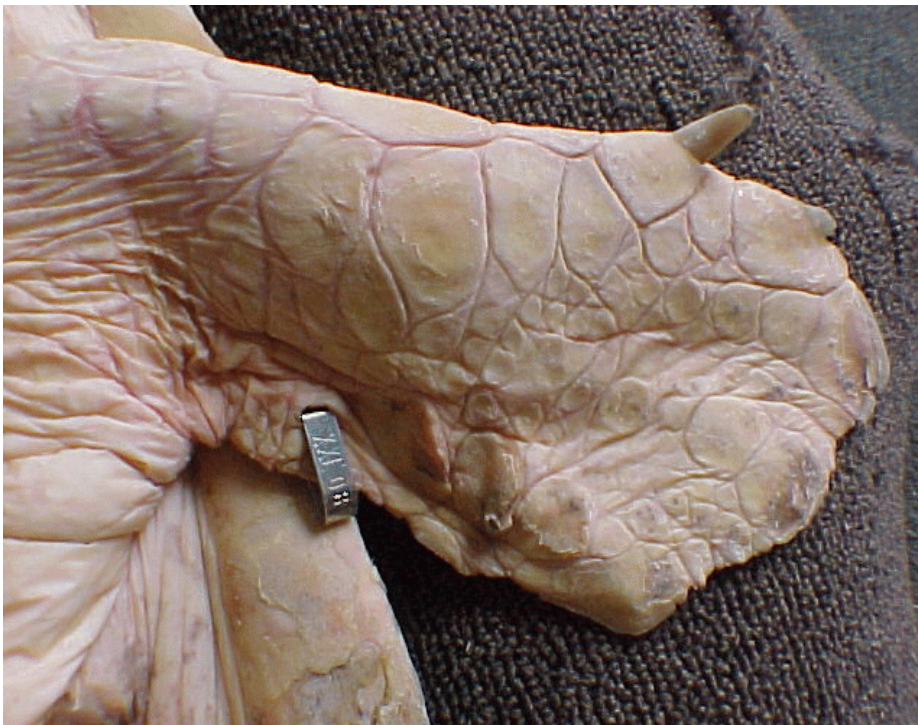
Step 2. Place index finger in tag with pointed side up.



Step 3. Firmly pull the tag with your index finger straight back into the open jaws of the applicator (photos by L. Belskis).



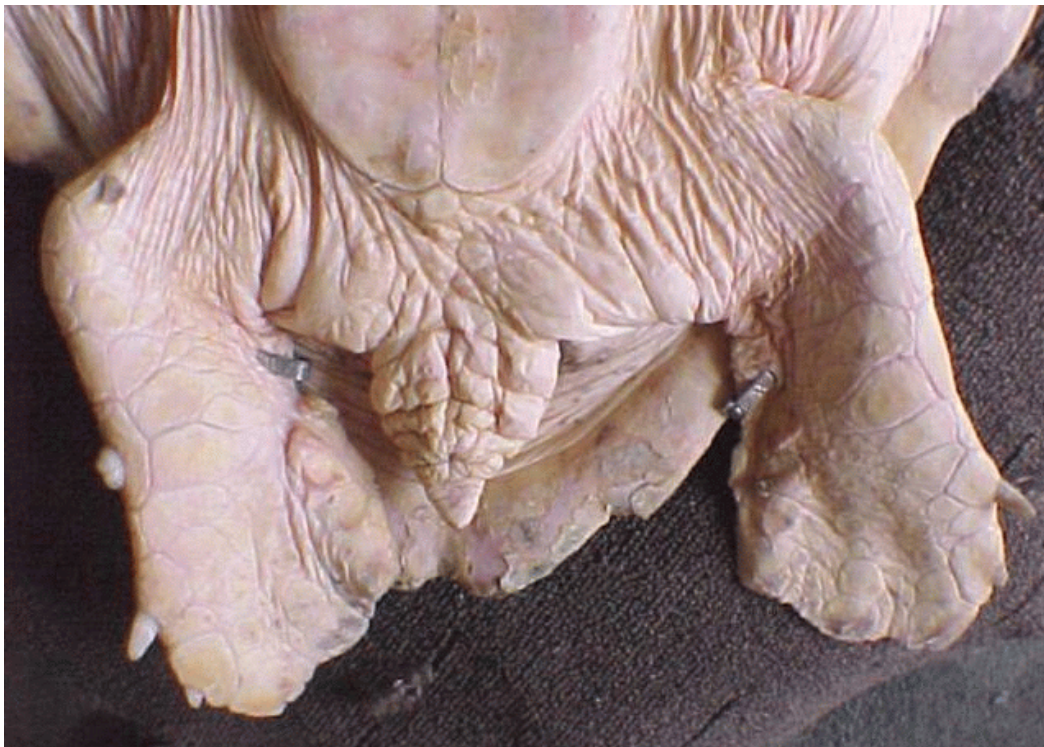
Applying an inconel tag to the rear flipper of a loggerhead turtle (photo by J. B. McNeill)



Inconel tag applied to the rear flipper of a sea turtle (photo by W. Teas)



Dorsal view of hind flipper with tag (photo by L. Avens).



Turtle with two hind flipper tags.

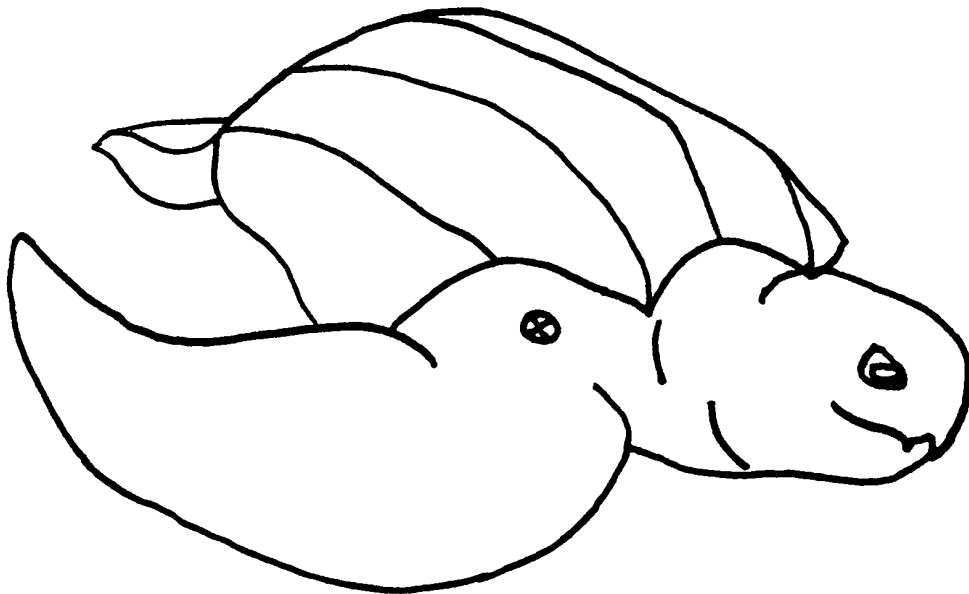
PIT TAGS**PIT Tag Scanning Protocol**

It is imperative that all species encountered be checked for PIT tags. Rarely a turtle may have more than one PIT tag.

1. Place PIT tag reader inside a plastic sealed bag to keep it from getting wet or slimed. Keep it in the bag at all times.
2. Scan sample tag to verify that batteries are good and that PIT tag reader is working properly. The button on the scanner needs to be continuously depressed throughout the scanning process. You will know it is scanning properly when the screen display says WORKING.
3. Place the PIT tag reader directly on the surface of the skin of the turtle, for hardshell turtles slowly scan the dorsal surface of both front flippers, including the shoulder and neck areas. Scan rear flippers, also. For leatherbacks, scan the dorsal musculature of both forelimbs and the top of the neck (see diagram). It is important to move the reader slowly since it cycles through different tag types and frequencies. Scan the entire area multiple times to ensure that you have not missed a tag.
4. Turn the hardshell turtle over and scan the ventral surfaces of all four flippers, including the “armpit”, neck, and vent areas.
5. If a PIT tag is detected, record the identification code exactly as it appears on the PIT tag reader display. I.D. codes may be all numbers or a combination of numbers and letters. Record all hyphens which may appear as part of the code. Double check to make sure you have recorded the I.D. code exactly as it appears on the reader display. Please be especially careful with letters and numbers that easily are confused, such as the letter O and the number 0. Record all tag numbers (there could be more than one PIT tag). If your reader display reads “AVID” or the text is garbled, you have detected an encrypted AVID tag. Record what you see on the viewer and insert a PIT tag in the opposite shoulder/flipper. See PIT tag application protocol C-7.
6. Wipe off the plastic bag. The PIT tag reader automatically turns itself off.
7. Replace batteries as needed. A small slotted screwdriver and 4 AAA batteries are provided.



Scanning for internal PIT tags (photo by W. Teas).



Leatherback turtles may have been PIT tagged in the shoulder region.

PIT Tag Application Protocol

How to tag a sea turtle using sterile packed single use PIT tags

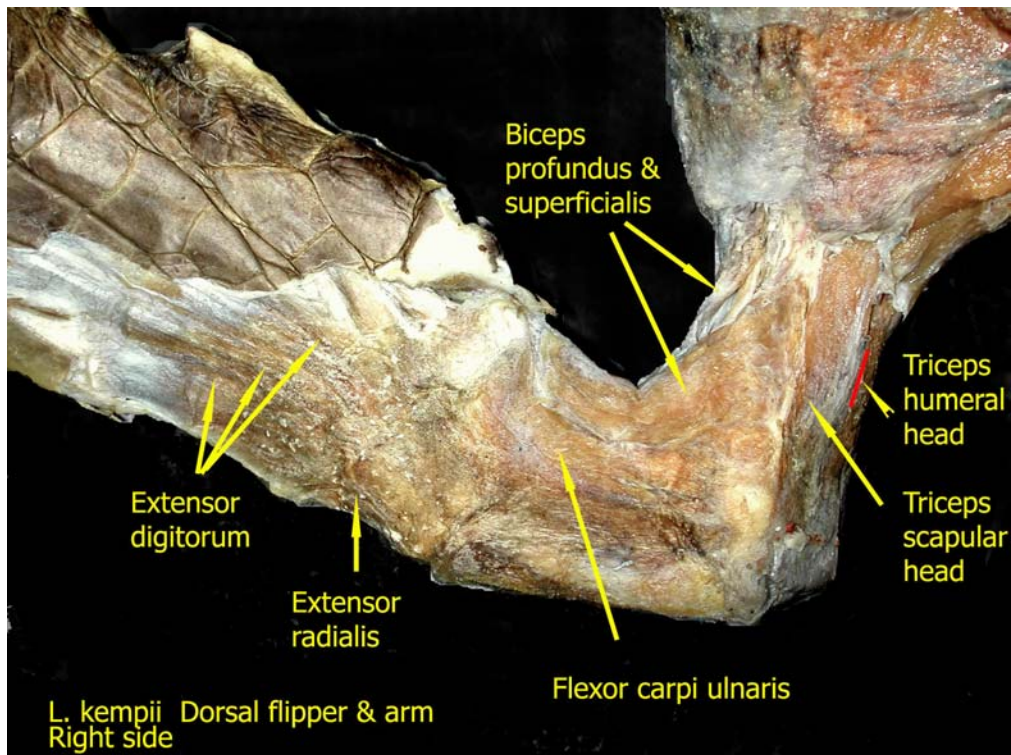
1. Scan the PIT tag before opening the package to ensure that it is a functional tag. Double check that the number on the display matches that on the label. See scanning protocol and follow steps 1 and 2.
2. Record the PIT tag number on the datasheet. Also peel off the self-adhesive label on the PIT tag package and attach to the datasheet.
3. Swab the PIT tag injection location with betadine. For hardshell turtles the location is in the left front flipper, in the triceps superficialis muscle, near the shoulder (see figures). Leatherbacks are tagged in the right shoulder at the “fattest” point (see figure above).
4. Open the PIT tag wrapper and remove the PIT tag. Pull back the white slide on top of the blue injector and insert the rectangular base of the needle. Push the white slide forward, being careful not to also push forward on the plunger.
5. Pierce the skin of the flipper with the needle, inserting the entire needle parallel to the surface, just under the skin, but into the muscle. Slide the plunger forward.
6. Put your thumb over the injection site and apply pressure while carefully removing the needle, still attached to the blue injector. Remove the needle and dispose of it in a safety container.
7. If the injection site bleeds, swab site with betadine and apply pressure to the site until bleeding stops.
8. Scan the flipper for the PIT tag to ensure that it is functioning in the turtle.



PIT tag location site in hardshell turtles (photo by J.B. McNeill).



Inserting a PIT tag by pinching the muscle to feel for its proper positioning.



PIT tag placement (red line) shown in dorsal view (top) and ventral view (bottom) of a dissected Kemp's ridley flipper (photo and annotations by Jeanette Wyneken).

